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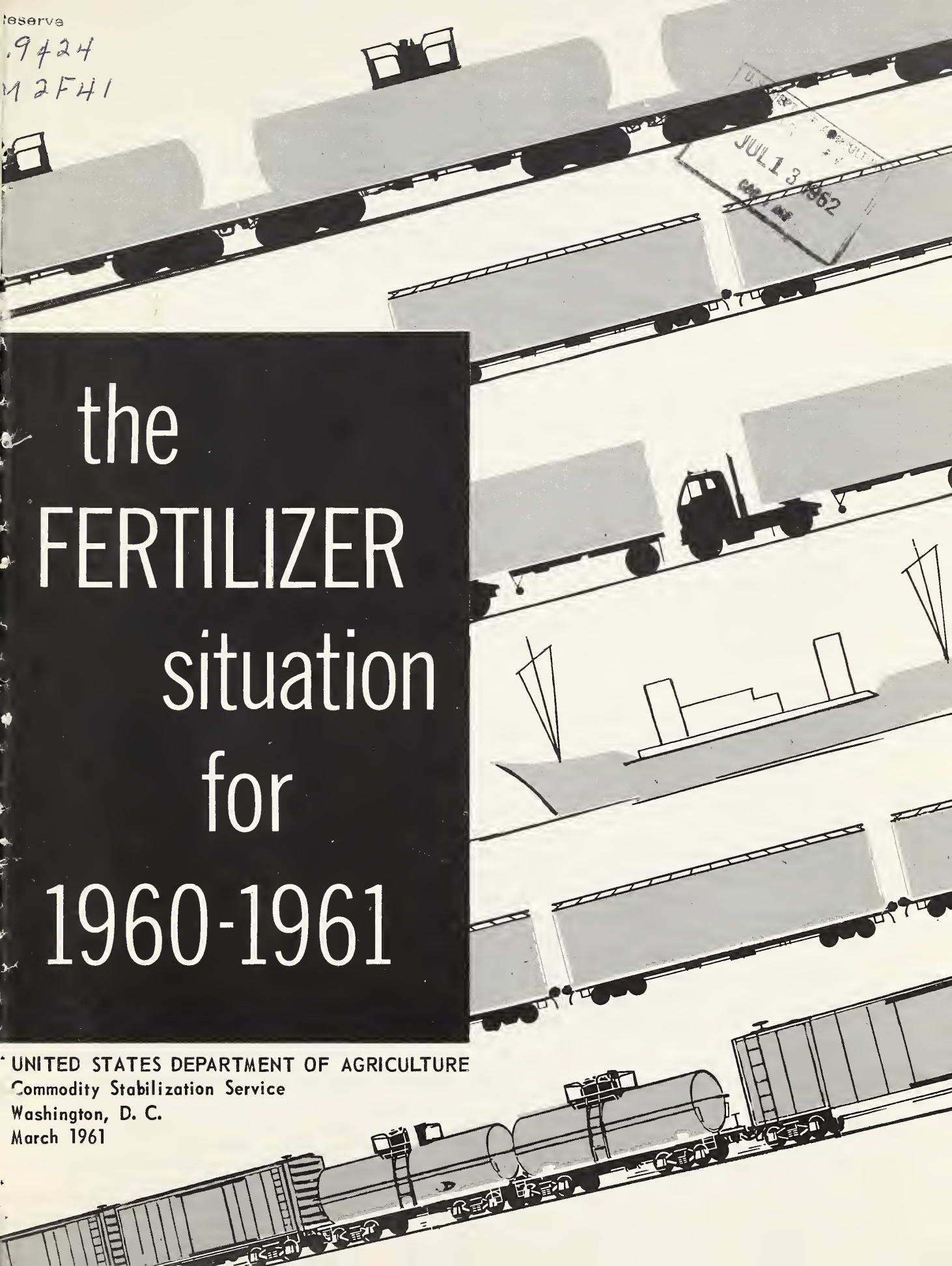
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the FERTILIZER situation for 1960-1961

UNITED STATES DEPARTMENT OF AGRICULTURE
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X THE FERTILIZER SITUATION FOR 1960-61 X

Supplies of fertilizers for 1960-61 are expected to total 8,293,000 tons of plant nutrients -- nitrogen (N), phosphate (P_2O_5) and potash (K_2O) -- an increase of 4 percent over 1959-60.

This report reflects the optimism of the fertilizer industry at a time when activity is at a reduced level in many other sectors of the economy. Estimates in this report, however, are based on stock trends, rates of production and foreign trade during the first six months of the fertilizer year in relation to the same period in other years. If these estimates are as realistic as they seem, a tight supply situation might arise this season because production schedules usually are not flexible enough to meet a sudden upsurge in fertilizer shipments. Changes in agricultural legislation or programs could have an effect on fertilizer trends.

Incredibly large quantities of fertilizers move to farms in a growing number of forms during an extremely short planting season. Weather conditions determine the start, interruptions, and even close of the season. Handling and transportation facilities become loaded to the limit. Timing influences farmer's preferences for particular kinds and forms of product. Spot orders result from unanticipated needs and many of these may remain unfilled during the busiest part of the season. More than at any time since the early 1950's, farmers this year would be wise to place their fertilizer orders well in advance of application to assure themselves of supplies of specific products.

Note: The fertilizer year is from July 1 through June 30.

Nitrogen (N)

Supplies of nitrogen for fertilizers for the 1960-61 year are expected to total 2,964,000 tons of N, up 4 percent over the record 1959-60 supply (table 1).

Production of anhydrous ammonia and fertilizer grade ammonium nitrate solution -- basic nitrogenous materials -- is again at record levels. Separately, in combination, or one or both supplemented with urea, these constitute about 60 percent of the total domestic supply. A 6 percent larger supply of anhydrous ammonia for direct application and use in mixed fertilizers is expected to be available this year. Exports of ammonia are expected to increase 40 percent over 1959-60. The supply of nitrogen solutions will rise nearly 4 percent, with imports expected to double. Some increase in exports of solutions is included in the figure for "all other" nitrogen.

About 5 percent more solid ammonium nitrate will be available than a year ago due to increases in production and imports, and further curtailment of exports.

Ammonium sulfate production was down about 69,000 tons of N content in 1959-60 from the previous year due to the steel strike and decreased synthetic production. Yet June 30, 1960, inventories of primary producers totaled 195,736 tons of material against 72,342 tons at the previous year's end. In the current year, by-product ammonium sulfate production is lagging behind normal levels because of reduced output of the steel industry's cokeovers, while producers of synthetic are operating only at about the same level as last year. Production plus stocks, however, should provide about a 3 percent increase in domestic material. Indications are that ammonium sulfate of exact specification as to granule size, etc., is in tight supply. This may reduce the competitive position of other ammonium sulfate because imports in the first half of the year lagged and exports were about the same. These circumstances may encourage shifts to other forms of nitrogen.

Urea production was down about one percent during the first half of the year but is expected to pick up during the second half. Imports were up about 50 percent; however, it is estimated that less than 40 percent of imported urea goes for fertilizer even though it is imported under that classification. Exports during the first five months of 1960-61 were about 3 1/2 times those of last year; prospects for the last half of 1960-61 indicate urea exports for the whole year will be about double those of a year ago.

Increased production of ammonium phosphates, nitric phosphates and ammonium nitrate-limestone is expected to raise other unspecified solid nitrogen carriers 16 percent over last year.

Anhydrous ammonia capacity continues to grow through expansion of existing plants and construction of new ones. About 453,000 tons of N capacity will be added to the present 4.3 million when six new plants are completed. In addition, a number of other plants are being expanded or have expansions scheduled for over 160,000 tons of N.

Table 1. -- NITROGEN: estimated supply of nitrogen for fertilizer purposes, 1959-60 and 1960-61, United States and possessions

(1,000 short tons of N)

Item	1959-60 ^{1/}	1960-61
<u>Supply from domestic sources</u>		
Solids:		
Ammonium nitrate ^{2/}	433	456
Ammonium sulfate ^{2/}	294	303
Urea	110	120
All other solids	256	302
Total solids	1,093	1,181
Liquids:		
Ammonia (including aqua)	841	891
All other	809	837
Total liquids	1,650	1,728
Total (solids and liquids)	2,743	2,909
<u>Imports</u>		
Ammonium nitrate	52	73
Ammonium sulfate	54	32
Urea ^{2/}	12	18
Ammonium nitrate-limestone mixtures	26	20
Sodium nitrate	73	70
Nitrogen solutions	6	12
All other	75	65
Total	298	290
<u>Exports</u>		
Ammonium nitrate	21	8
Ammonium sulfate	51	49
Urea	16	32
Ammonia (including aqua)	66	92
All other	34	54
Total	188	235
NET DOMESTIC SUPPLY	2,853	2,964

^{1/} Revised.

^{2/} Adjusted for estimated quantity going into non-fertilizer uses.

Phosphate (P₂O₅)

Domestic supplies of P₂O₅ for fertilizers in 1960-61 are expected to be 2,842,000 tons, 4 percent more than in 1959-60 (table 2).

Supplies from domestic production will be up 5 percent but imports will show little change and exports will probably be up 15 percent.

Normal and enriched superphosphate supplies are expected to be down 5 percent from 1959-60. Exports are likely to drop 25 percent.

Concentrated superphosphate production will be up over 10 percent. Heavy exports in the fall are expected to taper off to a 7 percent increase for the year.

Shipments of ammonium phosphates by primary producers will be up 28 percent over 1959-60. Imports are expected to be about the same as last year. Exports will probably be more than double those of last year and leave a net gain of less than 40,000 tons of P₂O₅.

Supplies of all other phosphates will increase 11 percent. Wet-process phosphoric acid production is at a record level -- 220,000 tons of P₂O₅ over last year. Furnace acid is up 10,000 tons of P₂O₅. Use of phosphoric acid for direct application and in liquid and solid mixed fertilizers in 1959-60 totaled an estimated 170,000 tons of P₂O₅.

A share of the extra phosphoric acid will go into increased production of concentrated superphosphate, ammonium phosphates, and nitric phosphates with some acid available for expansion in direct application and use in mixing plants. Indications are that there is a softening in the non-fertilizer market for furnace acid which will result in additional acid from this source going to the fertilizer industry.

Scheduled construction and expansion in the period 1960-62 (some of which is now on stream) will swell wet-process acid capacity 46 percent above the January 1, 1960, level of 1,348,300 tons of P₂O₅. Concentrated superphosphate capacity will be increased more than 25 percent and ammonium phosphate capacity will become nearly double that existing on January 1, 1960.

Table 2. -- PHOSPHATE: estimated supply of P_2O_5 for fertilizer purposes, 1959-60 and 1960-61, United States and possessions

(1,000 short tons of available P_2O_5)

Item	1959-60 ^{1/}	1960-61
<u>Supply from domestic sources</u>		
Normal and enriched superphosphate	1,329	1,264
Concentrated superphosphate	916	1,019
Ammonium phosphate ^{2/}	232	298
All other ^{3/}	351	384
Total	2,828	2,965
<u>Imports</u>		
Ammonium phosphate	56	56
All other	26	25
Total	82	81
<u>Exports</u>		
Normal superphosphate	36	27
Concentrated superphosphate	112	120
Ammonium phosphate	20	48
All other	9	9
Total	177	204
NET DOMESTIC SUPPLY	2,733	2,842

^{1/} Revised.

^{2/} Liquid and solid ammonium phosphate shipped as such by primary producers.

^{3/} Includes ammonium phosphate (produced in combination with potash salts to make mixed fertilizers), nitric phosphates, sodium phosphate, wet base goods, calcium metaphosphate, natural organics, phosphate rock and colloidal phosphate, basic slag, and estimates of wet and furnace phosphoric acid for liquid and solid mixed fertilizers and direct application.

Potash (K_2O)

Potash supplies for fertilizers in 1960-61 are expected to total 2,486,000 tons of K_2O , up 4 percent over 1959-60 (table 3).

Domestic deliveries of potassium chloride (muriate) to the States during the first half of the year were off 20 percent from the same period last year. Movement during the spring season is expected to bring the total for the year ahead of 1959-60. Potassium sulfate is expected to be up 4 percent over last year.

Imports of muriate will be down 10 percent and potassium sulfate down more than 25 percent from last year. Mixed fertilizers and other potash carriers are expected to continue at 1959-60 levels.

Even though a record production was attained last year, a record domestic and export movement reduced stocks to 73,000 tons of K_2O on June 30, 1960, whereas stocks had been 473,000 and 261,000 tons respectively in 1958 and 1959. Deliveries in 1960-61 must come from current production; hence a seller's market appears to be developing in potash.

Exports of potassium chloride the first five months of 1960-61 were 76 per cent larger than the same period in 1959-60. The rate during the remainder of the year may have to be decreased materially because anticipated needs at home are nearly equal to current production. As a result, exports for the year are likely to be reduced to 11 percent below 1959-60. World supplies reportedly have been reduced by a slowdown strike at French mines and by a mechanical breakdown at a Spanish mine. Because of the world supply situation U. S. producers have a more favorable export market but may not be able to take full advantage of it because of domestic needs.

Three producers have expansions underway. One producer is building a plant in Utah, scheduled for completion in late 1962, that will increase U. S. potash production capacity over 25 percent.

The first potassium nitrate plant in the United States directed to the fertilizer market is scheduled on stream in late 1961.

Bringing two facilities in Canada into production will add 760,000 tons of K_2O capacity to potash facilities in North America.

Table 3. -- POTASH: estimated supply of K₂O for fertilizer purposes, 1959-60 and 1960-61, United States and possessions

(1,000 short tons of K₂O)

Item	1959-60 ^{1/}	1960-61
<u>Supply from domestic sources</u>		
Potassium chloride	2,383	2,455
Potassium sulfate ^{2/}	127	132
All other	20	20
Total	2,530	2,607
<u>Imports</u>		
Potassium chloride	219	200
Potassium sulfate ^{2/}	39	28
All other	24	25
Total	282	253
<u>Exports</u>		
Potassium chloride	395	350
Potassium sulfate ^{2/}	15	15
All other	8	9
Total	418	374
NET DOMESTIC SUPPLY	2,394	2,486

^{1/} Revised.

^{2/} Includes sulfate of potash-magnesia.

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